

AGENDA

MEETING: Maine Library of Geographic Information Board
DATE: Wednesday, January 15, 2003
TIME: 10:00 a.m. – 12:00 p.m.
LOCATION: Burton M. Cross Building, Conference Room 107

TIME MINUTES	TOPICS FOR DISCUSSION	LEADER
10 Minutes	Introduction and Approval of December 18, 2002 Minutes	John Holden, Chair Ed Suslovic, Vice Chair
40 Minutes	Report from Orthoimagery Subcommittee <ul style="list-style-type: none">• Standards• Tiers	Jon Giles Larry Howard Dan Walters
30 Minutes	Update on the Bond and Federal Match	Harry Lanphear Dan Walters
15 Minutes	Discuss Timing and Options for Issuing a RFP for Orthoimagery	Dan Walters
15 Minutes	Update on Standards Committee	Larry Harwood
10 Minutes	Other Business <ul style="list-style-type: none">• Schedule Next Meeting & Agenda	

Special Notes:

MINUTES

GeoLibrary Board Meeting of January 15, 2003
Burton M. Cross Office Building, Conf. RM 107
10:00am – 12:00pm

Board Member Attendees as follows:

1. Dennis Boston, Central Maine Power
2. Will Mitchell, Mitchell Geographic's
3. Jon Giles, City of Portland
4. Paul Mateosian, City of Bath
5. Bob Faunce, Consultant to Lincoln County
6. Ray Halperin, Dept. of Transportation
7. Tom Asbeck, Photo Science, Inc
8. Jim Page, James W. Sewall
9. Bob Doiron, Maine Revenue Services

10. Harry Lanphear, DAFS/Office of the CIO
11. Ed Suslovic
12. Barbara Charry, Maine Audubon Society
13. Marilyn Lutz on behalf of Harlan Onsrud

Not in Attendance:

Jim Damicius, Maine Science Tech. Foundation
Harlan Onsrud, UMaine
John Holden, Eastern Maine Develop. Corp.

Non-Board Member attendees:

Dan Walters, DAFS/OGIS
Larry Harwood, DAFS/OGIS
David Burns, Emerge
Patrick, Delorum
Jim Skillins, Delorum
John Armentrout, Northern Geomatics

Introductions:

John Holden was not in attendance. The meeting was facilitated by Ed Suslovic, Co-Chair. Ed thanked everyone for attending and opened the meeting with introductions.

Motion to approve minutes of the December 18, 2002

Ed presented the motion to approve the minutes of December 18, 2002 Ray Halperin Motioned for approval as written and John Giles seconded the motion for approval. There were no discussions and the minutes were unanimously approved by the Board.

Report from Orthoimagery Subcommittee, presented by Jon Giles, Larry Harwood and Dan Walters:

Jon Giles went over the summary hand out dated January 6th, 2003, which discussed some alternative to their original specifications discussed at the December 18th GeoLibrary Board meeting. The alternatives are listed below and ranked with #1 being their highest preference.

1. Keep existing specifications, but find more money.

These next two alternatives are of equal preference to the group:

- 2a.) Keep existing specifications, but do a smaller area
- 2b.) Use the Massachusetts specifications for as much of Maine as possible, starting with Tier I areas.
- 3.) Provide funds as matching grants to subsidize municipal photography.
- 4.) Utilize existing photography and provide matching grants to add value to existing photography.

-no questions were posed at this point.

Dan discussed the piece on how the Tier's were established in the original Resolve 23 proposal and to look at some parameters that might help the board members make some sense out of it. Dan and Larry passed out three Maps with Tier processes based upon the

discussion with the subcommittee and information from Resolve 23 to take a stab at how it might be done, if the Board does decide to go through the Tier process or rolling bases. The maps are listed below:

Map 1 - 2000 Population in Maine

Map 2 - Number of Parcels per Square Mile by Townships

Map 3 - Approximate Population per Square Mile

Map 4 - Proposed Areas for Orthophoto Production

Map 1 - is simply the 2000 Population and our goal was to look at the State realistically given the comments received by the board from the last months meeting. Maybe we won't need a really high resolution imagery for the North Woods where there is more moose than people, and in some areas of the State where development is occurring very rapidly we may need very high resolution imagery and potentially there's a space in between where a moderate level of imagery might be okay for the next 3 – 4 years and as things emerge we can go to a higher resolution imagery at some point and time.

Map 2 – we are looking at the number of parcels per square mile townships, in which I thank Bob for providing data for UT's and also David Ledew from the Maine Revenue Service for the information on the organized towns. These numbers may not be perfect due to the time constraints but it is pretty darn good. As opposed to population this paints the picture of how the development or ownership is spread out.

Map 3 – more of a fine cut on the population from the 2000 census data and we did population density (population per square mile) as a result of that you can see the Urban centers are immediately visible on the Map due to the higher concentration of people (over a 1000 persons per square mile). Creating out into the suburbs of the cities and dropping off fast as you get further to the North Woods.

There's quite a diversity out there when you look at these 3 maps and the challenges as to where do you draw the line. Larry and I took a shot of drawing the line, which is reflected in Map 4.

Map 4 – this map was not considered by dollars but by what we felt was a reasonable fit based on the information from the three maps above and what was in Resolve 23. The map was sectioned off by Tiers A, B and C. The black lines are from the original Resolve 23 Tier outlines and based on the population Larry has derived we have moved the entire resolution stuff up further north to capture some of the more developing towns in the tier jurisdiction.

Tier A (pink) – the area that can be proposed to be done at the 1,000 photo scale standard the Committee came up with for the most populated area of the State and fastest growing area but it also overlaps with some of the interest of the 133 city study, this area will include the Augusta area which MEMA, FEMA and USGS are interested in, and also includes Bath and Kittery area. There is potential some opportunity maybe to leverage some additional funds for the higher resolution cost. This could also be the first of a roll out process if the board chooses to go that route over the next 5 years.

Tier B (yellow) – would be done at a final digital orthophoto scale of 1:5000, which in gross terms is 2 – 2 1/2 times better than what we currently have for the State and would be in color.

Tier C (green) – would be done at the Standard USGS products scale which is what we have now but an updated version 1:12,000 orthophoto from 1997-98 and we would update it for the current year we are in. The other option in this Tier for financial constraints would be not to do anything up in the Green area except for the small portion of the State in which the DOQ's were never completed, and we could spend money on completing the DOQ's in that area.

Questions and Comments:

Please clarify what the different levels will allow the communities to do having the 1to1000 vs. 1 to5000 vs. 1 to 12000?

1in =1000 ft. is the scale of the raw imagery before you do any mapping or orthorectification. You can start to see buildings as polygons instead of point features; you can resolve roads as double line features with a right edge and left edge as apposed to a center line, streams, larger utility poles, sidewalks, etc...

Dan when you gave the three scales, did you mean 1 inch = 1000ft or did you mean 1:1000 and the numbers that you gave are they fractions or 1inch =ft?

1in = 1000 ft is the photo scale, an equivalent scale as apposed to a proportional or unit list scale. Its 1-inch = a 1000 ft or 1:12,000.

- ▶ The numbers given were 1 inch = 1000 ft.
- ▶ Tier B is using the Massachusetts standards, the photography or the image collection could be as small scale 1 inch = 2500ft. That would be the scale of the collected photography or the imagery.
- ▶ In the DOQ area we believe USGS uses photography at 1:30,000 which is 1 inch = 2500ft.
- ▶ Smaller the pixels the larger the image size. At some point the only issue would be performance.

The Tier C seems like; if original intention is to reproduce quad sheets they are 1 inch = 1,000 ft. The DOQQ's quarter quads are 1 inch = 1000ft., is this what you're showing for Tier C (Green area)?

- ▶ Yes, it is the standard USGS product which would be the 1:12,000. Potentially full color but most likely black and white due to the complication of collecting color photography at that altitude. Basically the green area (Tier C) is updating what we have with same scale and parameters or just completing what is not done.
- ▶ Again, the Yellow area (Tier B) the photographs would be collected at the same altitude. We believe the map photography is collected at 30,000 ft, again which allows you to collect more ground cover equaling a full quad coverage. If you go to the DOQQ's quarter-quad then they generally drop the flight height to 15,000ft. With the Yellow area gives you the same altitude but the processing gives you the better resolution going from a meter to half a meter, relative to what density the photographs are scanned and depends upon what final pixel out break you want.

If the image was collected digital and not photographed, scales would not be an issue only pixel resolution and National Map accuracy standards. In a digital world pixel resolution and accuracy standards is what matters.

The accuracy you want to achieve in the end will decide upon whether you want a digital image or photography.

Can you put a number of pixels for each of the different Tiers?

- ▶ Yes, Tier A = 1 ft ground pixel resolution, Tier B = 1 1/2 meter or 2ft ground pixels resolution, Tier C = 1 meter resolution

What is the output of the product, would that give the end users something that they currently do not have in each of these tiers?

- ▶ Certainly, in Tier C the only advantage would be updated imagery from existing photos from 96 – 98.

Do we have a cost estimate or guestimate for what it would take for what we want to do?

- ▶ Yes, its listed in the handout provided which states:
- ▶ Standard USGS will cost \$42.00 per square mile, photography itself they estimated \$580,000 Statewide. The base everything on a Statewide basis for the DOQ product.
- ▶ Massachusetts Standard is \$92.83 per square mile; this is based on the fact that MassGIS spent \$492,000 to produce orthos for 5,300 square miles.
- ▶ The standard proposed by the Orthophoto Standards Committee estimated is very difficult to estimate lacking without vendor proposals. The best estimate we can do is a range of values. Aerial photography at 1' = 1,000' has been variously estimated at from \$84.00 per square mile to \$208.00 per square mile. The cost of ortho rectification is estimated to be from two thirds to one half the total cost probably 1/2 for larger areas, or from \$168.00 per square mile to \$416.00 per square mile.
- ▶ This was all film based and not digital. It may be cheaper if we do it on a digital basis.

What is the advantage or disadvantages are of a film vs. Digital base approach? What do we loose if we go one way vs. the other?

- ▶ Price maybe a issue
- ▶ Digital base would take a lot of the manual features away and we may be able to get a higher quality terrain model. With a film model we may be require to use an off the shelf USGS Terrain model.
- ▶ Digital Technology is developing rapidly but the bottom line is you get what you pay for.
- ▶ With Digital you get what ever pixels you ask for, there is no scanning so it tends to be a little faster and less costly. 1ft pixel resolution at the National Map Accuracy Standard would be about \$250 - \$300 per square mile.

Cumberland County was filmed in the spring of 2000-01 by a company called Citypix that was owned by Kodak which has since pulled the plug on it. Were not sure what is going to happen with those images currently but the towns licensed the use of those images from

the company. They didn't actually own the images but the company has since gone out of business and the Committee was discussing on meeting with the Attorney General's Office to look at the contract to see what implications that has now on the images or possible having the GeoLibrary Board discuss the idea of seeing if the Maine inventory of the images were for sell. Jon had heard that not only was Cumberland County area done but also Lewiston/Auburn and Bangor/Brewer were also flown. He has not confirmed that rumor but if we could buy it at fire sell price at getting some images would be a cost savings.

Filling in the holes where we do not have any imagery is very important. Staying with the coarser scale is fine but using the parcel maps, and making sure that we plan to fly it in the next several years. This is not dismissing Green Tier C but calling it a coarser scale.

Will USGS allow us to cut the pie in various ways to fly under the Map program to fly parts of the state and not others? Do we have the option to put Tier C aside?

- ▶ We believe you can not due to the fact they look at it as a statewide project.
- ▶ It would be a possibility to put Tier C aside, particularly if we are willing to work with to complete the areas that have not been photographed yet, but to only focus on one Tier would not be accepted. They are looking at more of a statewide product.

For Tier C did you look at using Satellite imagery?

- ▶ The committee discussed it but was hesitant to go into that quilted or mosaic approach that it was dismissed thoroughly. Not to say it couldn't work.
- ▶ We should look at getting a baseline for the entire State.

If the condition from the USGS is that the entire state be done, then the formula of necessity is $1.1 + 1.1 =$ the whole State. What Dan has shown the board is an estimate and what we need to do is take the information that Dan has submitted (Tiers A,B,C) and submit them to USGS as a suggestion given that we may make changes to get an accurate figure.

The board has agreed to the Tiers and mapping that Jon Giles, Larry Harwood and Dan Walters have proposed with a few modifications such as the Bangor area may need some of the pink treatment (Tier A) and maybe some of the existing pink areas moved to Yellow (tier B).

If the consensus is to get this done by April or May we need to get the ball rolling on the RFP. We are best to proceed with the plan Dan, Jon and Committee has come up with, with a few modifications. We do have a bill title in for 8.2 million dollars for GIS funding and in order to at least get some of this money we need to show visible progress towards meeting our goals. If we can get this project going Ed Suslovic won't push this bill as hard for June but will wait till the November ballot. Also, we need to look at who we may be able to piggyback on; as Ed understands there is a lot of impotence for \$100 million dollar bond issue for "Land for Maine's Future". We need to secure as much as we can even with the strings Feds may be putting on us.

On the next bond issue we need to specify to fund recommendation #4; we need to fund the vacuum cleaner to go out and collect the data and do what ever we need it to do to work in the Library.

If we decide to go through USGS, we would in fact be sending them a large check out of our bond money. Then will there be enough money left for Dan's office to fund the gear you need to implement this stuff when we get it from the Government?

- ▶ There are two issues here...in the work plan we looked at last week we allocated 1.6 million for Orthoimagery which is what USGS has and this was assuming we had the full 2.3 million dollars of the remaining 700k dollars there's X-amount of dollars allocated for creating the infrastructure to store the data and deliver it over the internet. But that also assumes that the current operating costs which funds Larry's position and another position at the office would continue and that is currently being funded through the enterprise fund. They are the only operating funds right now for the Library. Other than what the GIS Executive Council is funding for State Activities.

Discuss Timing and Options for Issuing a RFP for Orthoimagery:

If the Fed's deliver on reasonable time scale we would have difficulty getting out to anybody if we didn't have the full 2.3 million. Using existing State resources we can contract for that. It would take money out of the 2.3 million but it wouldn't be our preferred method, it would make more sense just to use our state resources but you can contract.

If we can access the full 2.3million and get the Fed's to move rapidly, that is a better argument for us to then go look for other pots of money. We have all this material and we need to get across the finish line to get the material out to the users. We would rather have that problem then have us waiting to get it all lined up, the window would be closing.

Is the preference to have USGS do the photograph work or issue the RFP? If timing isn't an issue and USGS has a contract method that works and there is no objection in letting USGS do it, lets save the effort of doing the RFP and everything that goes along with it. If there a reason why we wouldn't want them to do the work?

- ▶ Lets here from the Maine GIS community present at the meeting today....would the above have gone to some in-state or if the Fed's do it does this mean its automatically someone out-of-state?
 - Either way nothing is fixed as a result of which way you go. From the bidders perspective we are comfortable if the contract goes to the Feds.
- ▶ Is there entities in-state that is on the Fed's list to do this work?
 - Yes, but very few. There will be Maine companies that will be eliminated due to the Federal list is per certified.
- ▶ Does USGS bid out every job separately? In others words they don't have set contract prices per square mile they bid out each job independently?
 - They may have a fee schedule already established.

Another way to look at this is if we decide to bid it any can be and you're not limited to the Federal list. There's pro's and cons to this. If we did go through USGS it would rule out investigating going through a digital work process, because there are no digital firms that are on the Federal Contract list.

Is the consensus that it's not perfect but it gets us going into the right direction as far as letting the Feds do it? The other issue regarding an e-mail from Roberts is that this is all subject to the Federal budgets getting approved which they accept end of January. We are talking about a very short turn around time for us.

We are locked into using the USGS production system for developing the digital Orthophoto regardless of whether it's the standard product or higher resolution. They would use their staff but it will not limit us to using a different resolution in certain areas.

Motion made by Robert Faunce to go through USGS given the time constraints, Ray Halperin seconded the motion.

Discussion:

Is it clear that USGS meet the time schedule and have it done in April? They will start the flying in April but when it will be completed is another question.

If members of the board may choose to bid on this due to being on the Federal list do we vote or not? The board feels you may want to recuse yourself from the voting process.

No further discussion.

7 – Yes

1 – Opposed

4 – Abstentions

Motion passes.

Update on Standards Committee:

We have formed a Cadastral Standards Committee and we will be meeting on the 1/29th here at the COB in Conf. RM 401 from 9:00 – 12:00 and the participants will be Liv Detrick-Island Institute, John Giles-City of Portland, Mary Ann Hayes-State Planning Office, James Henderson-State Archives, Sari Hou-University of Maine, Ellen Jackson – Dept. of Conservation, Jim Fisher-Hancock County Planning Commission, Dick Kelly-State Planning Office, Tim LeSiege – Dept. of Transportation, Paul Mateosian – City of Bath, Ken Murchison – Northern Maine Regional Planning Commission, conservation, Jim Rea – Dept. of Conservation and Kristen Sommer – Greater Portland Council of Governments.

Any questions – No.

Comments: Dennis Boston, Central Maine Power Co. asked to join the Committee. Jim Paige offered the services of Gerry Thurlow, James W. Sewall Co. to the Committee.

Next Meeting items:

The bond issue that was submitted by Ed Suslovic (8.2 million) at some point will be sent back to Ed from the Revisor's Office and we are going to need to flush out how we propose to spend the money. I will have exactly 5 days to get it back to the Revisor's Office. Now, this will not be the final cut as to how the money is spent but a starting point. Is the Board comfortable if the Chair, Co-Chair, Dan Walters, and Harry Lanphear to get a ruff cut of how the Board will spend the money, rather than have an emergency meeting? Yes, that's fine and Ed will forward and e-mail out with an update and comments.

To be forwarded later.

In Closing the next Geoboard meeting will be held on February 19th from 10:30 –12:30 pm here at the Burton M. Cross Office Bldg. in Room 107 and there after every third Wednesday from 10:30 – 12:30pm unless stated otherwise.

No other business

Meeting adjourned